

Partial English translation of letter sent by Eka chemicals

March 6, 2009

The brand name "Nyacol" has been renamed as "BINDZIL". However, please be assured that products having the brand name, BINDZIL, are identical to those having "Nyacol".

Encl. : Certificate of analysis, product data sheet, and safety data sheet of BINDZIL 9950.

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AkzoNobel
Tomorrow's Answers Today

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平成 21 年 3 月 6 日

エカケミカルス株式会社
小山美智恵 (印)

サンプル送付

拝啓 時下ますます御清栄のこと、御喜び申し上げます。

庄子にご依頼をいただいた Nyacol 9950 のサンプルと書類をご送付
申し上げますので、ご査収の程宜しくお願い申し上げます。

なお、Nyacol というブランド名は、BINZIL という名称に変更にな
っております。名称は変更されておりますが、成分、物性等に変更はございませ
ん。

敬具

記

BINZIL 9950
分析表
製品案内
MSDS

1 L
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1 通
1 通

以上

eka

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CERTIFICATE OF ANALYSIS

BINDZIL 9950

Customer Eka Chemicals K.K.

客戶名稱

To Mr. Masayuki Shoji

收件人

Fax. No.

傳真號碼

Your Order No.

客戶訂單號碼

Our Order No.

出貨單號碼

Quantity

數量

1 (kg)

Lot No.

批號

N81104

Transport No.

送貨單號碼

Container No.

貨櫃號碼

Certificate No.

分析報告號碼

ANALYSIS

| Parameter | Unit | Results | Method | Init |
|------------|-------------------|---------|--------|------|
| 項目 | 單位 | 結果 | 分析方法 | 分析者 |
| Density | g/cm ³ | 1.394 | AP005D | NC |
| Silica | % | 50.5 | AP054 | NC |
| pH | | 9.0 | AP009 | NC |
| Appearance | | Passed | | |

Remarks :

備註

Sampling date : Nov. 05 . 2008

Signature *Nina Chou*

Date issued : Mar. 02 . 2009

Nina Chou



an Akzo Nobel company

PRODUCT DATA SHEET

BINDZIL® 9950 COLLOIDAL SILICA

PRODUCT CHARACTERISTICS

BINDZIL® 9950 is an alkaline, aqueous dispersion of colloidal silica at 50% concentration. The dispersed silica is present as amorphous spheres. The particles carry a slightly negative charge and have a large surface area-to-weight ratio. BINDZIL® 9950 has a milky appearance.

| TYPICAL PROPERTIES | |
|---|-----|
| Silica, wt. % | 50 |
| Specific Surface Area (m ² /g) | 80 |
| pH | 9.0 |
| Viscosity, cP | 15 |
| Na ₂ O, wt. % | 0.1 |
| Density, g/cc | 1.4 |

END USES

BINDZIL® 9950 is a colloidal silica useful in those applications where a moderately large particle size dispersion is desired. These include miscellaneous polishing and paper industry uses.

STORAGE, HANDLING AND PACKAGING

BINDZIL® 9950 is freeze sensitive. BINDZIL® 9950 is best stored in a dark closed tank made of non-rusting materials such as plastic or coated steel. Aluminum, copper or regular steel should be avoided. Storage temperature should be 5-35°C. BINDZIL® 9950 stored under recommended conditions; shelf life is a minimum of 12 months. BINDZIL® 9950 is shipped in plastic drums, IBCs/totes or in bulk.

HEALTH, SAFETY AND ENVIRONMENT

Before handling this material, read the corresponding Material Safety Data Sheet for health, safety and environmental information.

Revision date: Nov 2005

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Information herein is accurate to the best of our knowledge. Suggestions are made without warranty or guarantee of results. Before using, user should determine the suitability of the product for his intended use and user assumes the risk and liability in connection therewith. We do not suggest violation of any existing patents or give permission to practice any patented invention without a license.


AKZO NOBEL

SAFETY DATA SHEET

1. Identification of the substance/preparation and the company/undertaking

Manufacturer/supplier
Eka Chemicals AB
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 Sweden
 Tel: +46 31 587000
 Fax: +46 31 587730
 Emergency Response Center (ERC)
 Sweden: 020 996000
 Int: +46 8 3377043

Product name
Bindzil 9950

ID: 10716 1097

Chemical/Technical description
 Amorphous Silica, aqueous colloidal solution.

Intended use
 Inorganic binder, surface modifier and flocculating agent.

2. Composition/information on ingredients

See Section 16 for R-phrase text

This product is a preparation as defined by 99/45/EC.

| <u>Hazardous ingredients</u> | <u>CAS No</u> | <u>EEC No</u> | <u>Classification</u> | <u>R-phrases</u> | <u>% in product</u> |
|------------------------------|---------------|---------------|-----------------------|------------------|---------------------|
| None | | | | | |

3. Hazards identification

| | |
|------------------------------|--|
| Classification | Not classified as dangerous for health or as dangerous to the environment. |
| Health effects | Mildly irritating to eyes and skin. |
| Environmental effects | See Section 12. |
| Other effects | None known. |

4. First aid measures

| | |
|---------------------|---|
| Inhalation | Move to fresh air. |
| Skin contact | Wash off immediately with plenty of water. Seek medical advice if irritation develops. Remove and wash contaminated clothing before re-use. |
| Eye contact | Immediately wash eye thoroughly with plenty of water whilst separating the eyelids. Seek medical attention if the symptoms persist. |
| Ingestion | Rinse mouth. Drink plenty of water. Obtain medical attention. Do not induce vomiting! |

5. Fire fighting measures

| | |
|---------------------------------------|---|
| Extinguishing media | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| Unsuitable extinguishing media | None known. |
| Special protective equipment | No special recommendations. |
| Special exposure hazards | None known. |

6. Accidental release measures

| | |
|---|--|
| Environmental cleanup procedures | Dam up. Soak up with inert absorbent material. If liquid has been spilt in large quantities clean up promptly by scoop or vacuum. Collect as much as possible in a clean container for (preferable) reuse or disposal. |
| Personal precautions | See Section 8. |

SAFETY DATA SHEET

7. Handling and storage

| | |
|---------------------------|---|
| Handling | As with all chemicals, good industrial hygiene practices should be followed when handling this material. |
| Storage | Keep at temperatures between 5-35°C. Store in closed dark tankers made of anti-corrosive material. Does not stand freezing. |
| Materials to avoid | Aluminium, copper or mild steel. |

8. Exposure controls/personal protection

| | |
|-------------------------------------|---|
| Respiratory protection | Not applicable under normal conditions of use. However, good ventilation should be provided in working areas. |
| Hand protection | Rubber/PVC gloves. |
| Skin protection | Full working clothes recommended. Contaminated clothing should be laundered before re-use. |
| Eye protection | Wear as appropriate: goggles or face-shield. Eyewash fountains are recommended. |
| Occupational exposure limits | Silica - Amorphous: (ACGIH, TWA, 10 ppm inhalable particle, 3 ppm respirable particle) (MAK, TWA: 4 ppm inhalable particle), (HTP, TWA: 5 ppm). |

9. Physical and chemical properties

(These values are typical for the product and should not be considered as a specification)

| | |
|--|-------------------------------|
| Form | Liquid. |
| Colour | Clear - cloudy. |
| Odour | Slight. |
| pH | 8 - 10 |
| Density/Bulk density | 1050 - 1400 kg/m ³ |
| Melting/boiling point | 0°C/100°C. |
| Viscosity | < 50 mPa.s |
| Solubility | Disperses (water). |
| Vapour pressure | As water. |
| Partition coefficient (Log Pow) | Not applicable. |
| Flash point | Not applicable. |
| Autoinflammability | Not applicable. |
| Explosion limits upper/lower | Not applicable. |

10. Stability and reactivity

| | |
|--------------------------------|---|
| Hazardous decomposition | None known. |
| Conditions to avoid | Do not allow to freeze. Avoid drying out of the sol as this can lead to a build up of dust. |
| Materials to avoid | Contact with acids causes the product to gel. |
| Hazardous reactions | None known. |

11. Toxicological information

*Estimated from analogous products

| | |
|-----------------------|---|
| Acute toxicity | LD50 (oral, rat) >2000 mg/kg.* |
| Health effects | |
| Inhalation | Inhalation of aerosols/mist may cause irritation to the respiratory passages due to the pH. |
| Ingestion | May cause irritation of the mucous membranes. |
| Skin contact | Mildly Irritating. (Rabbit)* |
| Eye contact | Mildly Irritating. (Rabbit)* |

SAFETY DATA SHEET

| | |
|---|---|
| <i>Sensitisation Data</i> | Not a sensitizer. (Magnusson-Kilgmann test) * |
| <i>Carcinogenicity/mutagenicity & long term effects</i> | Negative result in genetic in vitro test. (Ames test, OECD 471)* |
| <i>Reproductive/developmental effects</i> | No data available for this product. |
| <i>Subacute, subchronic, chronic effects</i> | Product contains amorphous Silicon dioxide. No cases of Silicosis have been reported from amorphous silica. |

12. Ecological information

**Estimated from analogous products*

| | |
|----------------------------------|--|
| <i>Aquatic toxicity</i> | Fish: LC50/96hr/Brachydanio rerio >5000 mg/l.* Crustacea: EC50/48hr/Ceriodaphnia = 7600 mg/l.* Algae: EC50/48hr/Selenastrum capricornutum = 440 mg/l, EC10 = 140 mg/l, LOEC = 120 mg/l, NOEC = 60 mg/l.* |
| <i>Biodegradability</i> | Not applicable (Inorganic compound). |
| <i>Bioaccumulative potential</i> | Not expected to bioaccumulate. |
| <i>Mobility</i> | No test results: Transport to air is not expected. Under certain circumstances, transport from earth to water may take place. |
| <i>Other effects</i> | Concentrations high enough to affect pH will be harmful to aquatic organisms. |

13. Disposal considerations

| | |
|-------------------------|---|
| <i>Product disposal</i> | In accordance with local and national regulations. |
| <i>Packaging</i> | If recycling is not practicable, dispose of in compliance with local regulations. |

14. Transport information

| | |
|--------------------------|--|
| <i>Transport summary</i> | Not classified as dangerous in the meaning of transport regulations. |
|--------------------------|--|

15. Regulatory information

| | |
|-----------------------|--|
| <i>EU regulations</i> | The product does not need to be labelled in accordance with EC directives or respective national laws. |
| <i>Product Cas No</i> | Preparation |

16. Other information

No R-Phrases in Section 2 and 3.

Use Only for industrial use.

Other information This Safety Data Sheet was prepared to comply with the following EU Directives: 67/548/EEC; 99/45/EC; 2001/58/EC.

The information provided in this safety data sheet relates only to this specific product and may not be valid for the product if used with other materials in any process. The information is, at the time of publication, to the best of the Company's knowledge and belief, accurate and reliable. However, no warranty, guarantee or representation is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability for his own purpose.

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Approved by: Ingvar Ohlsson *Issued by:* Ingvar Ohlsson